WHAT IS CLAIMED IS:

1. A compound, comprising:

a first metal center and a second metal center, wherein each metal has an atomic weight greater than 40; and

a bridging ligand coordinated to the first metal center and the second metal center; and

at least one photoactive ligand bound to the first metal center, and at least one photoactive ligand bound to the second metal center; and

wherein the transition dipole moment of the first photoactive ligand is orthogonal to the transition dipole moment of the second photoactive ligand.

2. The compound of claim 1, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength less than 480 nm.

3. The compound of claim 1, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength of 550-600 nm.

4. The compound of claim 3, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength less than 480 nm.

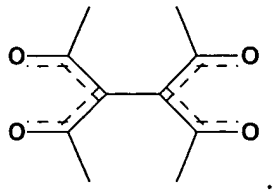
5. The compound of claim 1, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength of 500-520 nm.

6. The compound of claim 1, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength greater than 590 nm.

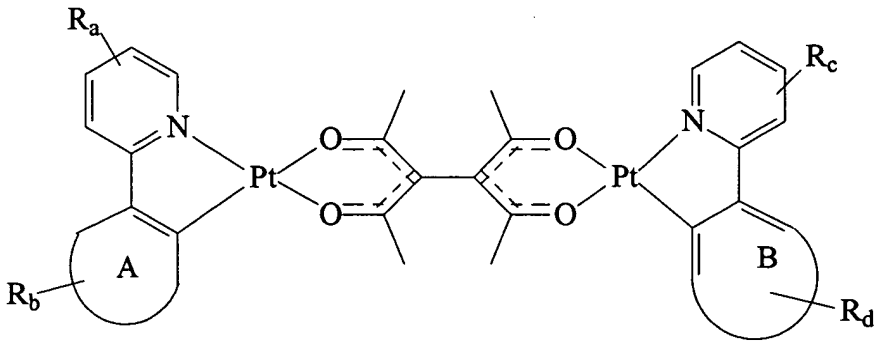
7. The compound of claim 1, wherein the first metal is Pt.

8. The compound of claim 7, wherein the second metal is Pt.

9. The compound of claim 8, wherein the bridging ligand comprises the structure:



10. The compound of claim 9, having the structure:



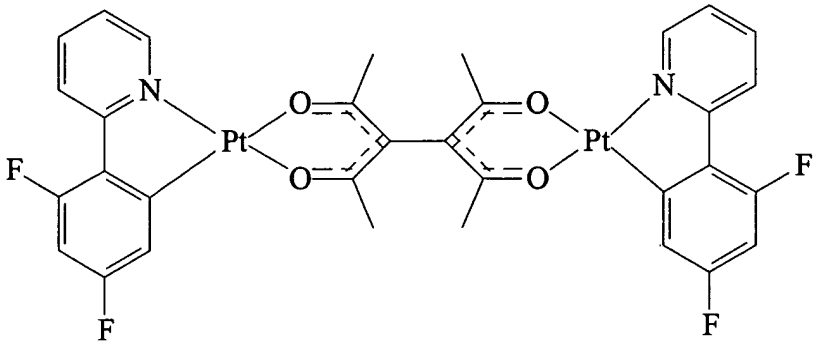
wherein

ring A and ring B are each independently an aromatic heterocyclic or fused aromatic heterocyclic ring;

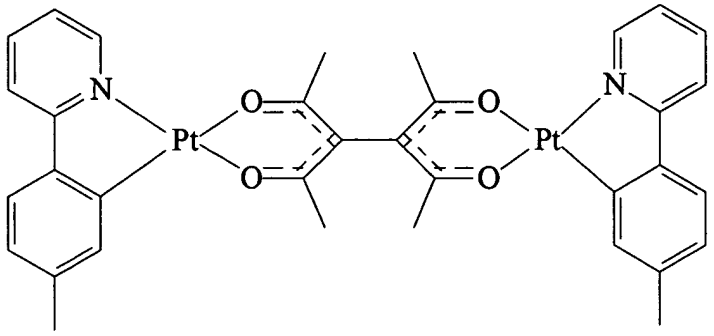
each R is independently selected from hydrogen, alkyl, alkenyl, alkynyl, alkylaryl, CN, CF_3, CO_2R, C(O)R, NR_2, NO_2, OR, halo, aryl heteroaryl, substituted aryl, substituted heteroaryl, or a heterocyclic group;

additionally or alternatively, any two adjacent substituted positions together form, independently, a fused 4- to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, heteroaryl, and wherein the 4- to 7-member cyclic group may be optionally substituted with substituent R.

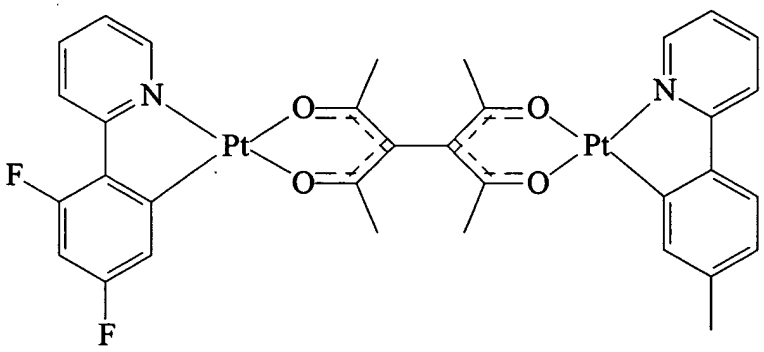
11. The compound of claim 10, having the structure:



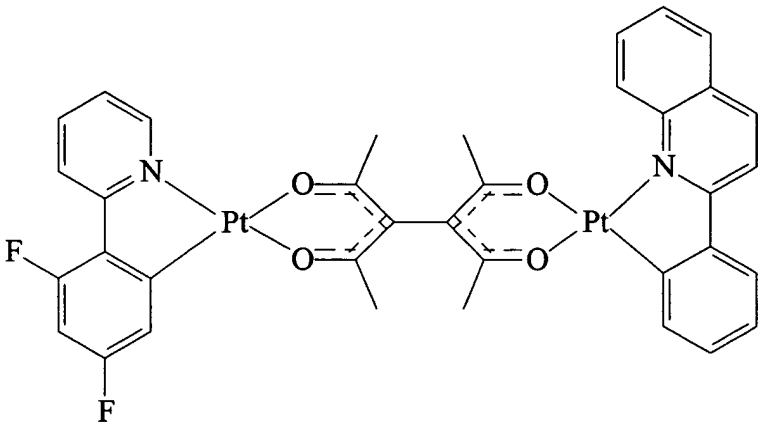
12. The compound of claim 10, having the structure:



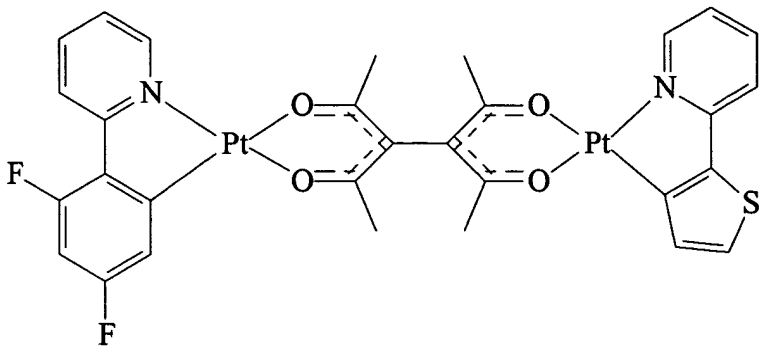
13. The compound of claim 10, having the structure:



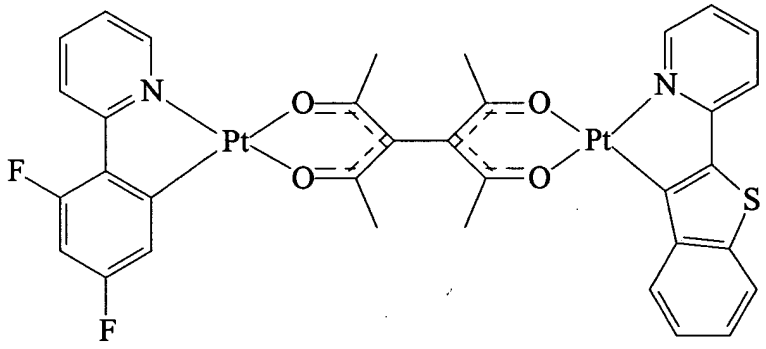
14. The compound of claim 10, having the structure:



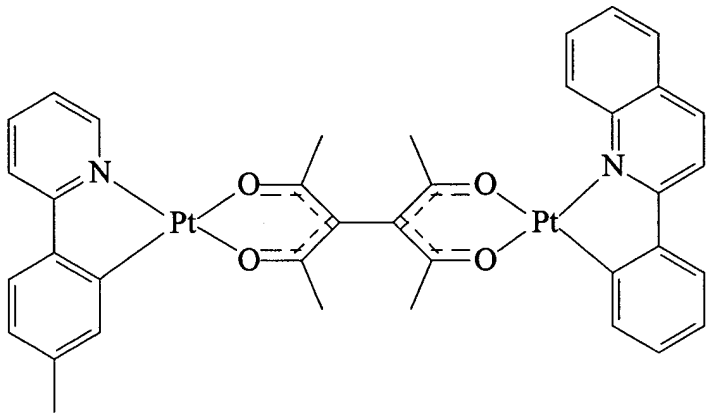
15. The compound of claim 10, having the structure:



16. The compound of claim 10, having the structure:



17. The compound of claim 10, having the structure:



18. A compound, comprising:

a first metal center and a second metal center, wherein each metal has an atomic weight greater than 40;

a bridging ligand coordinated to the first metal center and the second metal; and

at least one photoactive ligand bound to the first metal center, and at least one photoactive ligand bound to the second metal center; and

wherein the first metal center and the atoms of the bridging ligand that are coordinated to the first metal center define a first plane, and the second metal center and the atoms of the bridging ligand that are coordinated to the second metal center define a second plane, and wherein the first plane and the second plane form an angle that is between about 80 degrees and 100 degrees.

19. The compound of claim 18, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength less than 480 nm.

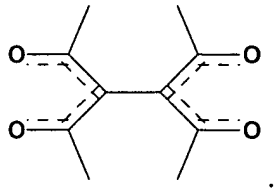
20. The compound of claim 18, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength of 550-600 nm.

21. The compound of claim 20, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength less than 480 nm.

22. The compound of claim 18, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength of 500-520 nm.

23. The compound of claim 18, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength greater than 590 nm.

24. The compound of claim 18, wherein the bridging ligand comprises the structure:

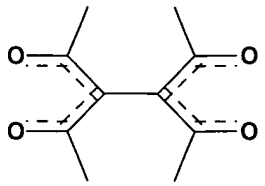


25. The compound of claim 24, wherein the first metal is Pt.

26. A compound, comprising:

a first metal center and a second metal center, wherein each metal has an atomic weight greater than 40;

a bridging ligand coordinated to the first metal center and the second metal center

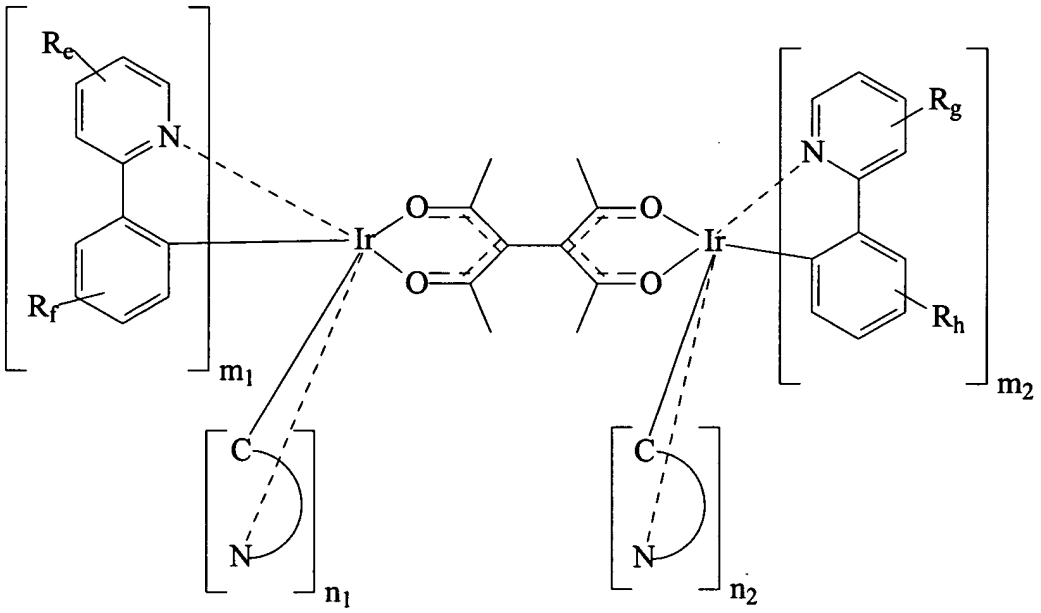
further comprising the structure  ; and

at least one photoactive ligand bound to the first metal center, and at least one photoactive ligand bound to the second metal center.

27. The compound of claim 26, wherein the first metal and the second metal are the same metal.

28. The compound of claim 27, wherein the first metal is Ir.

29. The compound of claim 28, having the structure:



wherein

(C-N) is a substituted or unsubstituted cyclometallated non-emissive ligand;

m has a value of 1 or 2;

$(m_1 + n_1)$ is 2; $(m_2 + n_2)$ is 2;

each R is independently selected from hydrogen, alkyl, alkenyl, alkynyl, alkylaryl, CN, CF_3, CO_2R, C(O)R, NR_2, NO_2, OR, halo, aryl heteroaryl, substituted aryl, substituted heteroaryl, or a

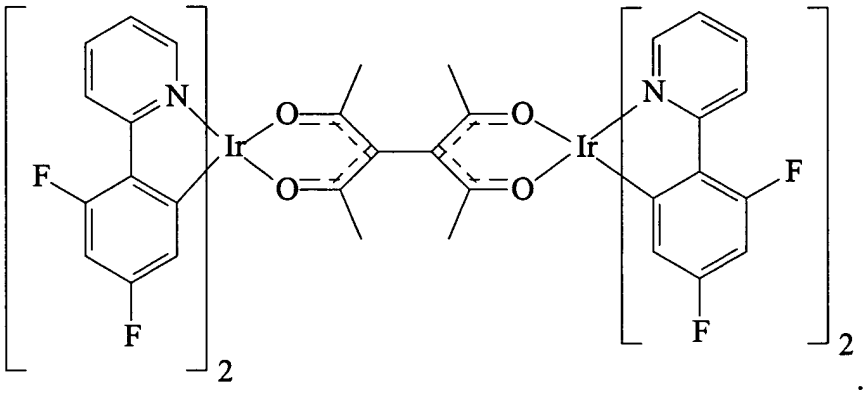
heterocyclic group;

additionally or alternatively, any two adjacent substituted positions together form, independently, a fused 4- to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, heteroaryl, and wherein the 4- to 7-member cyclic group may be optionally substituted with substituent R.

30. The compound of claim 29, wherein m_1 is 2 and n_1 is zero.

31. The compound of claim 30, wherein m_2 is 2 and n_2 zero.

32. The compound of claim 31, having the structure:



33. A compound, comprising

a first metal center and a second metal center, wherein each metal has an atomic weight greater than 40;

a polymer or small molecule coordinated to the first metal center and the second metal; and

at least one photoactive ligand bound to the first metal center, and at least one photoactive ligand bound to the second metal center, wherein the first metal-ligand complex is different from the second metal-ligand complex.

34. The compound of claim 33, wherein the first metal is Pt.

35. The compound of claim 33, wherein the first metal is Ir.

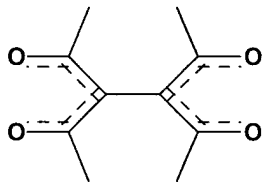
36. The compound of claim 33, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength less than 480 nm.

37. The compound of claim 33, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength of 550-600 nm.

38. The compound of claim 37, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength less than 480 nm.

39. The compound of claim 33, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength of 500-520 nm.

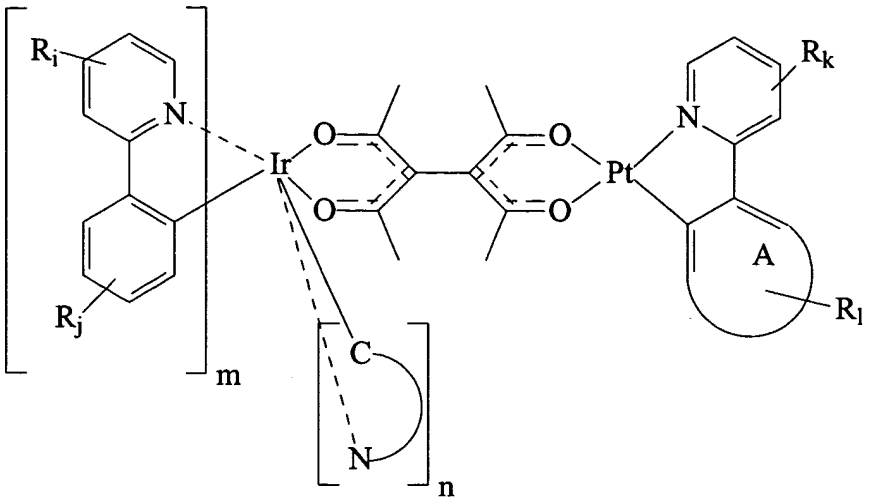
40. The compound of claim 33, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength greater than 590 nm.

41. The compound of claim 33, wherein the polymer or small molecule comprises the structure: 

42. The compound of claim 41, wherein the first metal is Pt.

43. The compound of claim 42, wherein the second metal is Ir.

44. The compound of claim 43, having the structure:



wherein

(C-N) is a substituted or unsubstituted cyclometallated non-emissive ligand;

m is a value from 1 to 3;

m + n is 3;

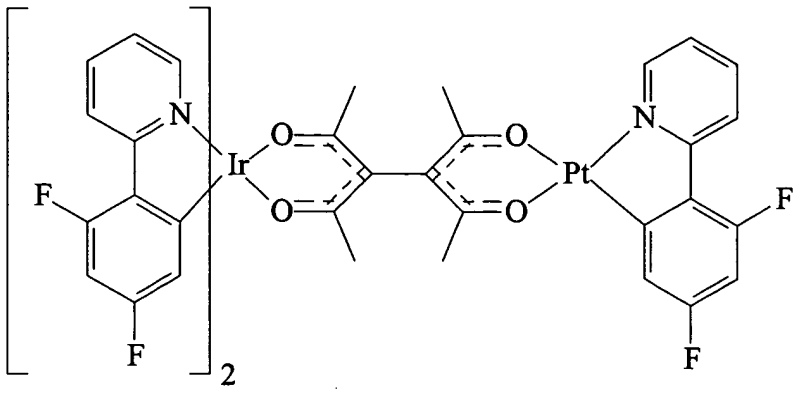
ring A is an aromatic heterocyclic or fused aromatic heterocyclic ring;

each R is independently selected from hydrogen, alkyl, alkenyl, alkynyl, alkylaryl, CN, CF_3, CO_2R, C(O)R, NR_2, NO_2, OR, halo, aryl heteroaryl, substituted aryl, substituted heteroaryl, or a heterocyclic group;

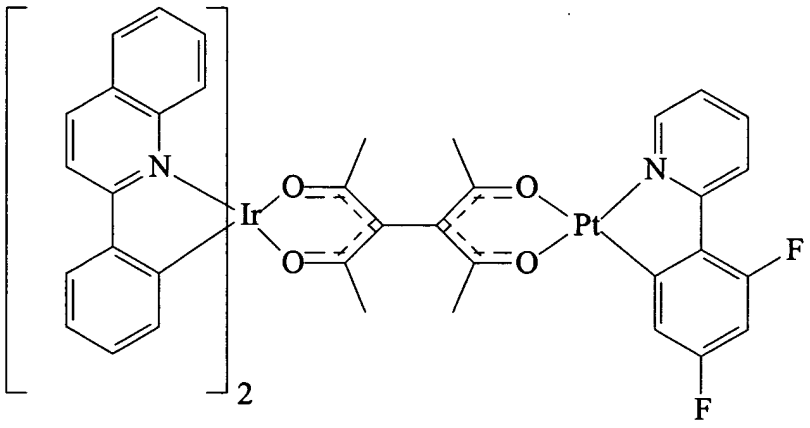
additionally or alternatively, any two adjacent substituted positions together form, independently, a fused 4- to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, heteroaryl, and wherein the 4- to 7-member cyclic group may be optionally substituted with substituent R.

45. The compound of claim 44, wherein m is 2 and n is zero.

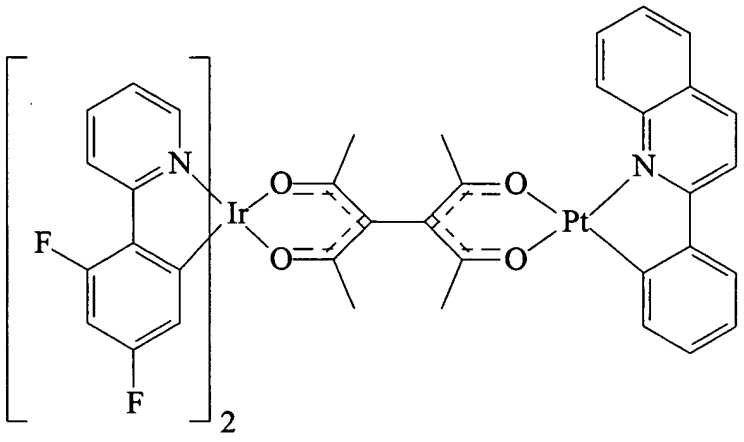
46. The compound of claim 45, having the structure:



47. The compound of claim 45, having the structure:

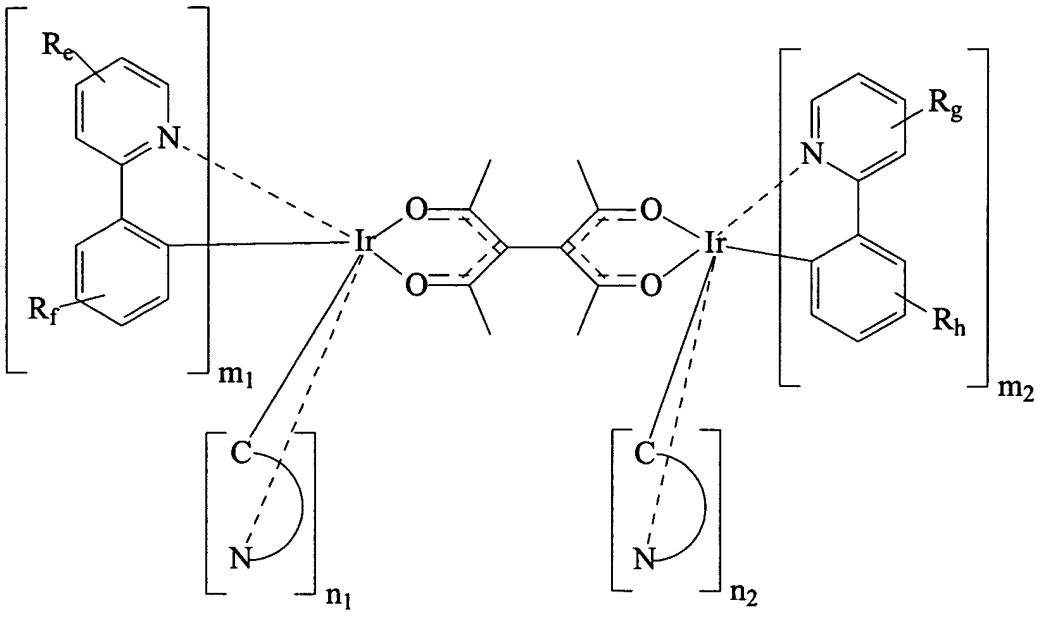


48. The compound of claim 45, having the structure:



49. The compound of claim 41, wherein the first metal is Ir.

50. The compound of claim 49, having the structure:



wherein

(C-N) is a substituted or unsubstituted cyclometallated non-emissive ligand;

m has a value of 1 or 2;

$(m_1 + n_1)$ is 2; $(m_2 + n_2)$ is 2;

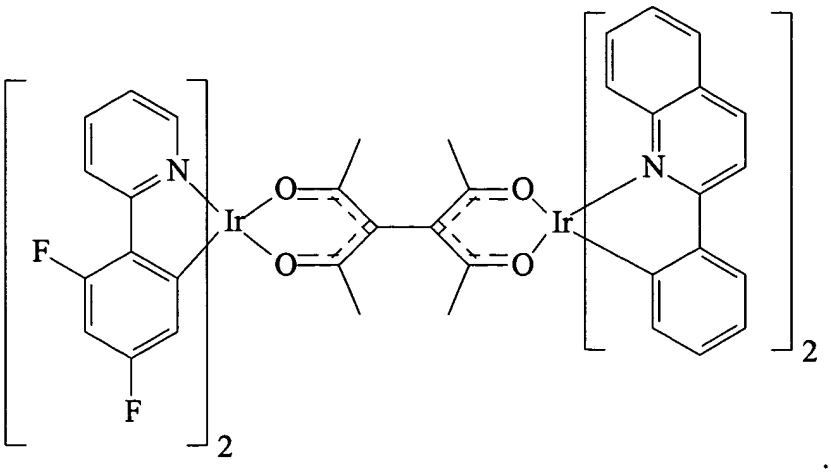
each R is independently selected from hydrogen, alkyl, alkenyl, alkynyl, alkylaryl, CN, CF_3, CO_2R, C(O)R, NR_2, NO_2, OR, halo, aryl heteroaryl, substituted aryl, substituted heteroaryl, or a heterocyclic group;

additionally or alternatively, any two adjacent substituted positions together form, independently, a fused 4- to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, heteroaryl, and wherein the 4- to 7-member cyclic group may be optionally substituted with substituent R.

51. A compound of claim 50, wherein m_1 is 2 and n_1 is zero.

52. A compound of claim 51, wherein m_2 is 2 and n_2 is zero.

53. The compound of claim 52, having the structure:



54. An organic light emitting device, comprising:

an anode, a cathode, and an emissive layer disposed between and electrically connected to the anode and the cathode, wherein the emissive layer further comprises a compound, comprising:

a first metal center and a second metal center, wherein each metal has an atomic weight greater than 40; and

a bridging ligand coordinated to the first metal center and the second metal center; and

at least one photoactive ligand bound to the first metal center, and at least one photoactive ligand bound to the second metal center; and

wherein the transition dipole moment of the first photoactive ligand is orthogonal to the transition dipole moment of the second photoactive ligand.

55. The device of claim 54, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength less than 480 nm.

56. The device of claim 54, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength of 550-600 nm.

57. The device of claim 56, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength less than 480 nm.

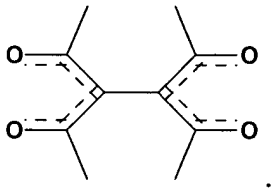
58. The device of claim 54, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength of 500-520 nm.

59. The device of claim 54, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength greater than 590 nm.

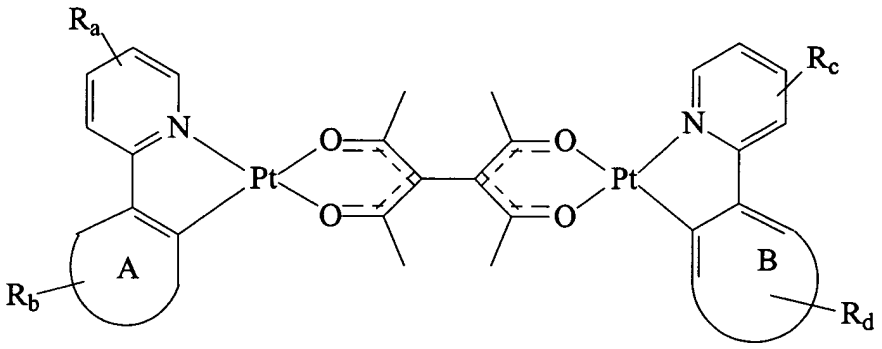
60. The device of claim 54, wherein the first metal is Pt.

61. The device of claim 60, wherein the second metal is Pt.

62. The device of claim 61, wherein the bridging ligand comprises the structure:



63. The device of claim 62, having the structure:



wherein

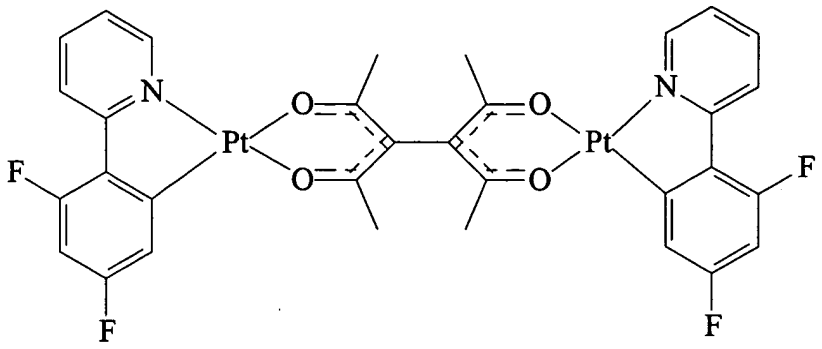
ring A and ring B are each independently an aromatic heterocyclic or fused aromatic heterocyclic ring;

each R is independently selected from hydrogen, alkyl, alkenyl, alkynyl, alkylaryl, CN, CF_3, CO_2R, C(O)R, NR_2, NO_2, OR, halo, aryl heteroaryl, substituted aryl, substituted heteroaryl, or a heterocyclic group;

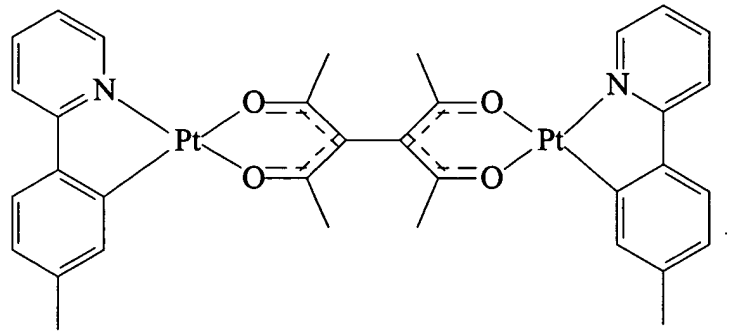
additionally or alternatively, any two adjacent substituted positions together form, independently, a fused 4- to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, heteroaryl, and wherein the 4- to 7-member cyclic group may be optionally substituted with

substituent R.

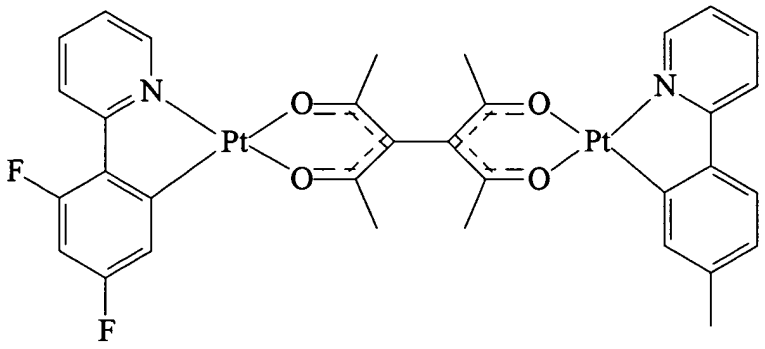
64. The device of claim 63, having the structure:



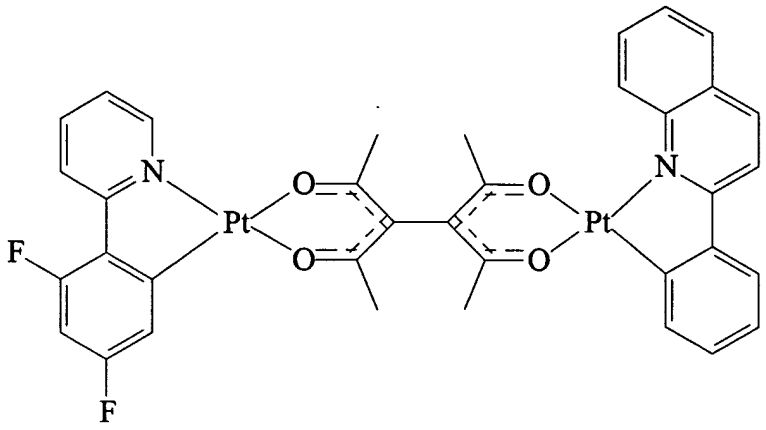
65. The device of claim 63, having the structure:



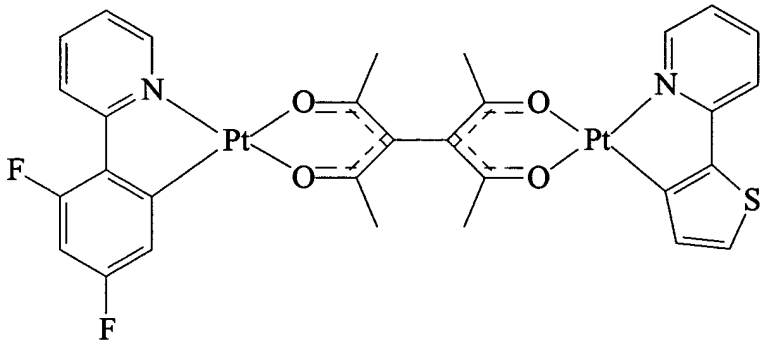
66. The device of claim 63, having the structure:



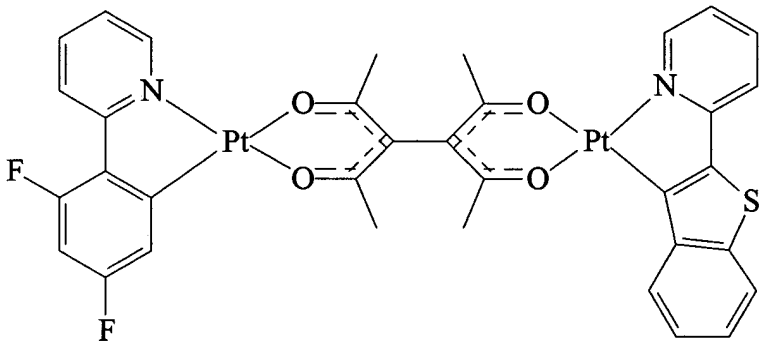
67. The device of claim 63, having the structure:



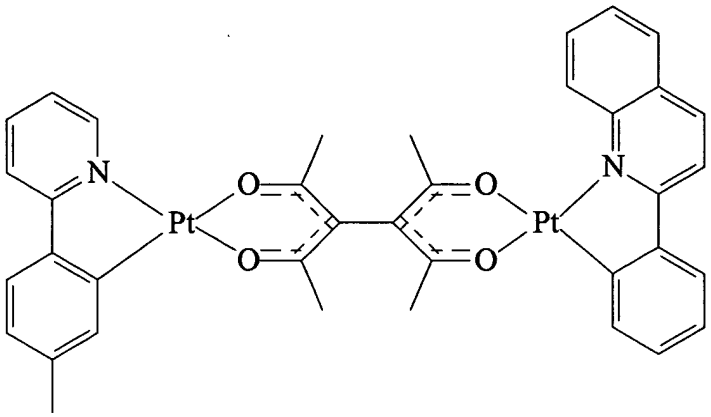
68. The device of claim 63, having the structure:



69. The device of claim 63, having the structure:



70. The device of claim 63, having the structure:



71. The device of claim 54, wherein the device is incorporated into a consumer product.

72. An organic light emitting device, comprising:

an anode, a cathode, and an emissive layer disposed between and electrically connected to the anode and the cathode, wherein the emissive layer further comprises a compound, comprising:

a first metal center and a second metal center, wherein each metal has an atomic weight greater than 40;

a bridging ligand coordinated to the first metal center and the second metal; and at least one photoactive ligand bound to the first metal center, and at least one photoactive ligand bound to the second metal center; and

wherein the first metal center and the atoms of the bridging ligand that are coordinated to the first metal center define a first plane, and the second metal center and the atoms of the bridging ligand that are coordinated to the second metal center define a second plane, and wherein the first plane and the second plane form an angle that is between about 80 degrees and 100 degrees.

73. The device of claim 72, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength less than 480 nm.

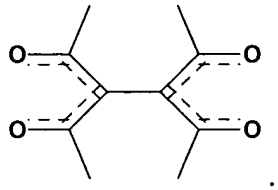
74. The device of claim 72, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength of 550-600 nm.

75. The device of claim 74, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength less than 480 nm.

76. The device of claim 72, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength of 500-520 nm.

77. The device of claim 72, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength greater than 590 nm.

78. The device of claim 72, wherein the bridging ligand comprises the structure:



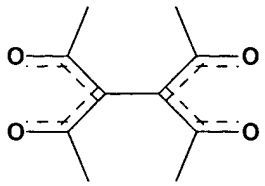
79. The device of claim 78, wherein the first metal is Pt.

80. The device of claim 72, wherein the device is incorporated into a consumer product.

81. An organic light emitting device, comprising:

an anode, a cathode, and an emissive layer disposed between and electrically connected to the anode and the cathode, wherein the emissive layer further comprises a compound, comprising:

a first metal center and a second metal center, wherein each metal has an atomic weight greater than 40;

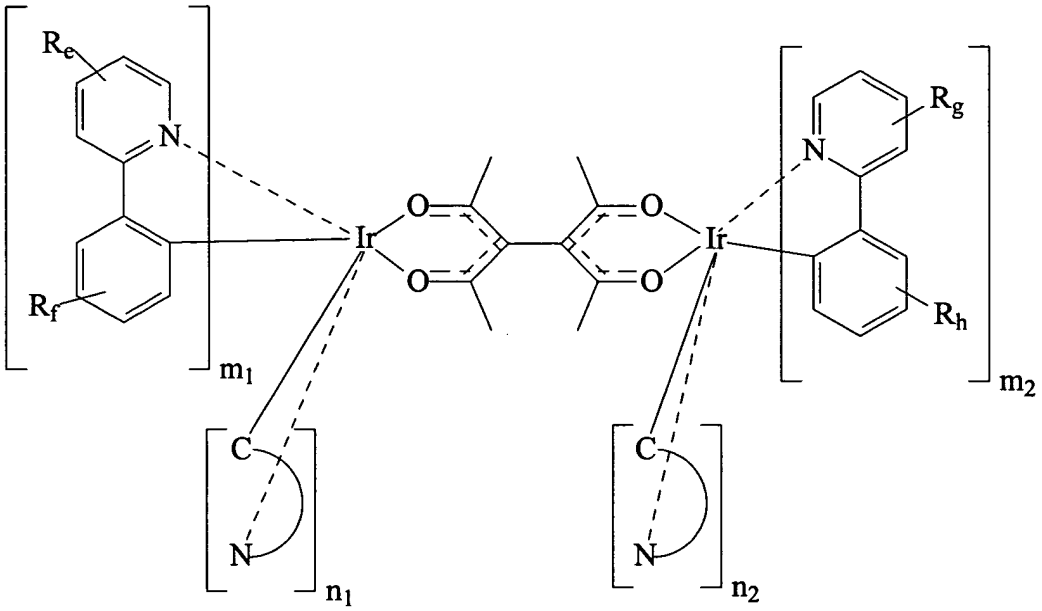
a bridging ligand coordinated to the first metal center and the second metal center further comprising the structure  ; and

at least one photoactive ligand bound to the first metal center, and at least one photoactive ligand bound to the second metal center.

82. The device of claim 81, wherein the first metal and the second metal are the same metal.

83. The device of claim 82, wherein the first metal is Ir.

84. The device of claim 83, having the structure:



wherein

(C-N) is a substituted or unsubstituted cyclometallated non-emissive ligand;

m has a value of 1 or 2;

$(m_1 + n_1)$ is 2; $(m_2 + n_2)$ is 2;

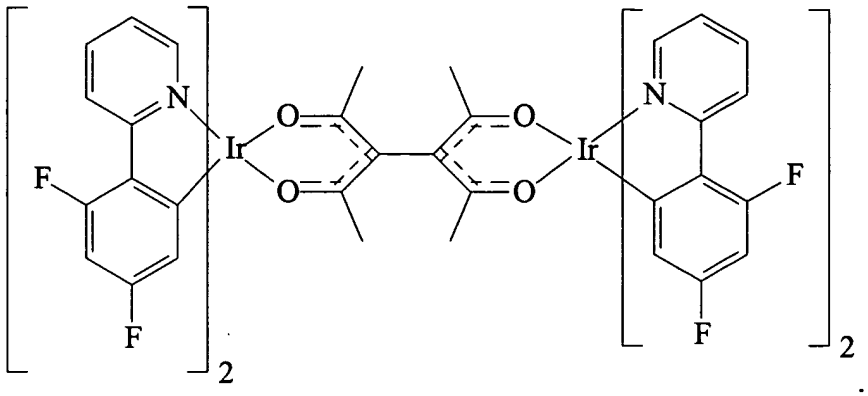
each R is independently selected from hydrogen, alkyl, alkenyl, alkynyl, alkylaryl, CN, CF_3, CO_2R, C(O)R, NR_2, NO_2, OR, halo, aryl heteroaryl, substituted aryl, substituted heteroaryl, or a heterocyclic group;

additionally or alternatively, any two adjacent substituted positions together form, independently, a fused 4- to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, heteroaryl, and wherein the 4- to 7-member cyclic group may be optionally substituted with substituent R.

85. The device of claim 84, wherein m_1 is 2 and n_1 is zero.

86. The device of claim 85, wherein m_2 is 2 and n_2 zero.

87. The device of claim 86, having the structure:



88. The device of claim 81, wherein the device is incorporated into a consumer product.

89. An organic light emitting device, comprising:

an anode, a cathode, and an emissive layer disposed between and electrically connected to the anode and the cathode, wherein the emissive layer further comprises a compound, comprising:

a first metal center and a second metal center, wherein each metal has an atomic weight greater than 40;

a polymer or small molecule coordinated to the first metal center and the second metal; and

at least one photoactive ligand bound to the first metal center, and at least one photoactive ligand bound to the second metal center, wherein the first metal-ligand complex is different from the second metal-ligand complex.

90. The device of claim 89, wherein the first metal is Pt.

91. The device of claim 89, wherein the first metal is Ir.

92. The device of claim 89, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength less than 480nm.

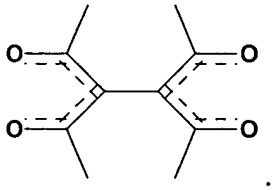
93. The device of claim 89, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength of 550-600 nm.

94. The device of claim 93, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength less than 480 nm.

95. The device of claim 89, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength of 500-520 nm.

96. The device of claim 89, wherein at least one photoactive ligand has a triplet energy corresponding to a wavelength greater than 590 nm.

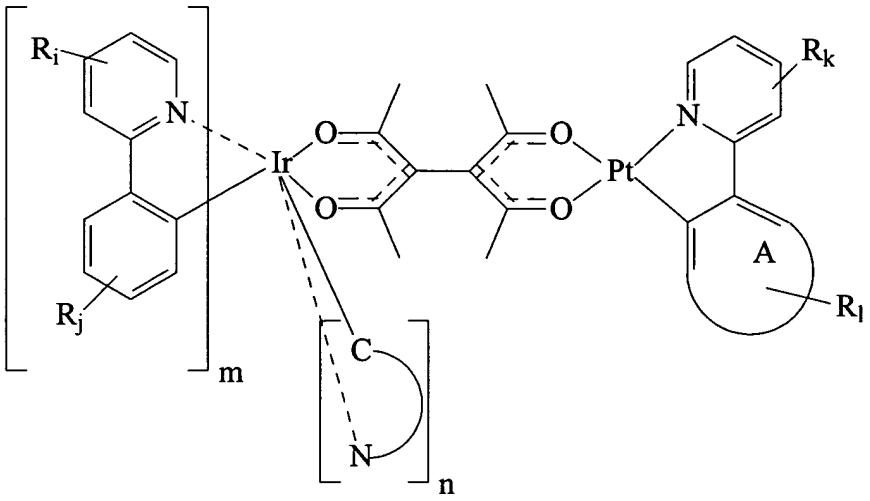
97. The device of claim 89, wherein the polymer or small molecule comprises the structure:



98. The device of claim 97, wherein the first metal is Pt.

99. The device of claim 98, wherein the second metal is Ir.

100. The device of claim 99, having the structure:



wherein

(C-N) is a substituted or unsubstituted cyclometallated non-emissive ligand;

m is a value from 1 to 3;

m + n is 3;

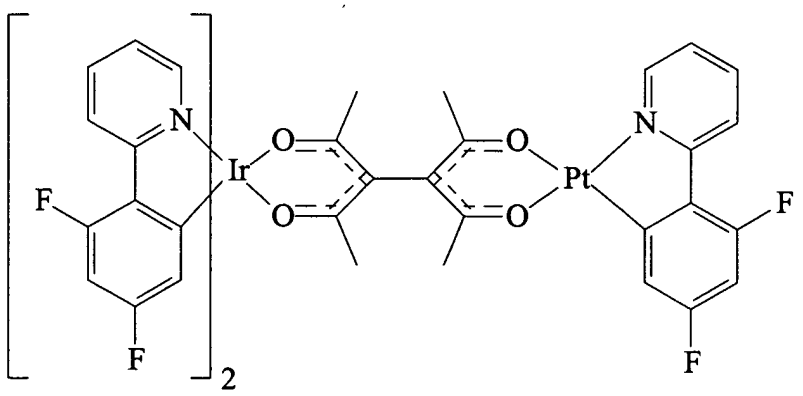
ring A is an aromatic heterocyclic or fused aromatic heterocyclic ring;

each R is independently selected from hydrogen, alkyl, alkenyl, alkynyl, alkylaryl, CN, CF_3, CO_2R, C(O)R, NR_2, NO_2, OR, halo, aryl heteroaryl, substituted aryl, substituted heteroaryl, or a heterocyclic group;

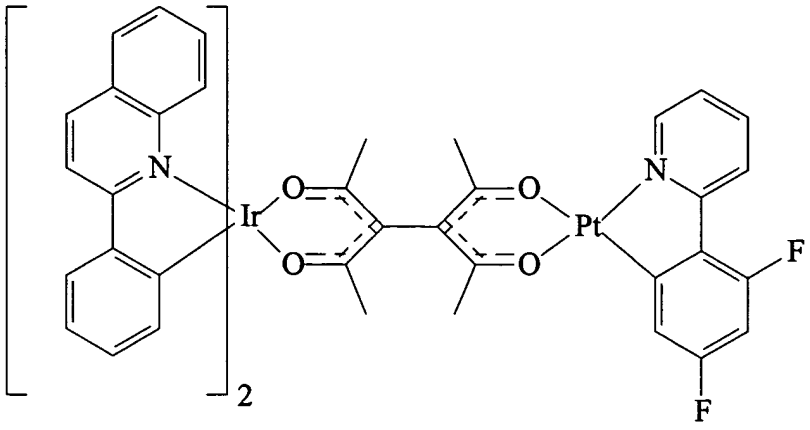
additionally or alternatively, any two adjacent substituted positions together form, independently, a fused 4- to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, heteroaryl, and wherein the 4- to 7-member cyclic group may be optionally substituted with substituent R.

101. The device of claim 100, wherein m is 2 and n is zero.

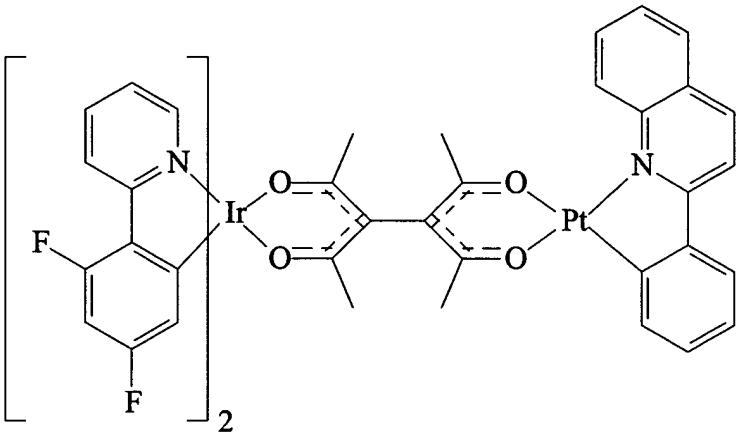
102. The device of claim 101, having the structure:



103. The device of claim 101, having the structure:

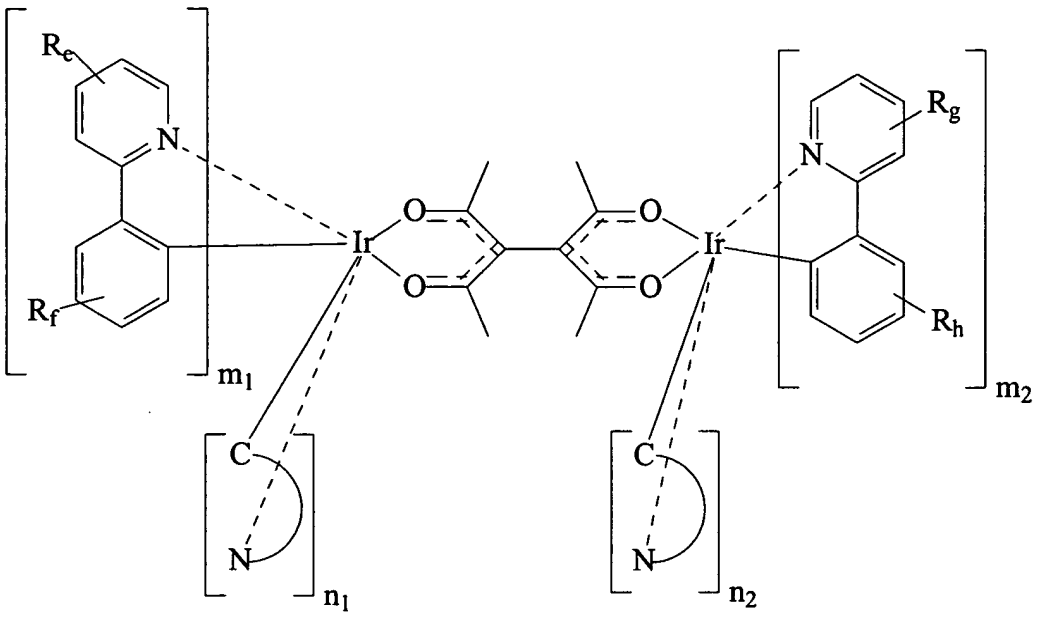


104. The device of claim 101, having the structure:



105. The device of claim 94, wherein the first metal is Ir.

106. The device of claim 102, having the structure:



wherein

(C-N) is a substituted or unsubstituted cyclometallated non-emissive ligand;

m has a value of 1 or 2;

$(m_1 + n_1)$ is 2; $(m_2 + n_2)$ is 2;

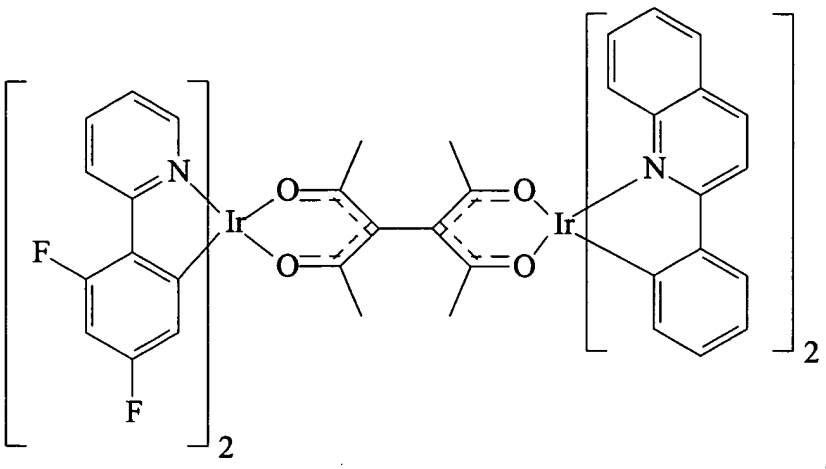
each R is independently selected from hydrogen, alkyl, alkenyl, alkynyl, alkylaryl, CN, CF_3, CO_2R, C(O)R, NR_2, NO_2, OR, halo, aryl heteroaryl, substituted aryl, substituted heteroaryl, or a heterocyclic group;

additionally or alternatively, any two adjacent substituted positions together form, independently, a fused 4- to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, heteroaryl, and wherein the 4- to 7-member cyclic group may be optionally substituted with substituent R.

107. A device of claim 106, wherein m_1 is 2 and n_1 is zero.

108. A device of claim 107, wherein m_2 is 2 and n_2 is zero.

109. The device of claim 108, having the structure:



110. The device of claim 89, wherein the device is incorporated into a consumer product.